

Work Order # \_\_\_\_\_ Job # \_\_\_\_\_ Activity # \_\_\_\_\_

1. Work requester fills out this section

STANDING WORK PERMIT ☐

Requester: CARTER B. Biggs Date: 12/18/02 Ext. 7515 Dept/Div/Group: Physics / Phoenix  
Other Contact person (if different from requester): \_\_\_\_\_ Ext. \_\_\_\_\_  
Work Control Coordinator C. Biggs Start Date 12/18/02 Est. End Date 12/19/02  
Description of Work / Problem: Replace regulator on DC/PE GAS  
RACK in GAS MIXING HOUSE (1008F)

Building 1008F Room GAS Equipment \_\_\_\_\_ Service Provider C. Biggs / L. Hawkins

2. Work requester, service provider, and ES&H (as necessary) fill out this section or attach analysis

**ES&H Analysis**

**RADIATION CONCERNS** ☒ NONE ☐ Activation ☐ Airborne ☐ Contamination ☐ Radiation ☐ OTHER \_\_\_\_\_  
☐ Special nuclear materials involved, notify Isotope Special Materials Group ☐ Fissionable materials involved, notify Laboratory Criticality Officer

**SAFETY CONCERNS** ☐ NONE

<input type="checkbox"/> Adding / Removing Walls or Roofs	<input type="checkbox"/> Confined Space*	<input type="checkbox"/> Explosives	<input type="checkbox"/> Lead*	<input type="checkbox"/> Penetrating Fire Wall
<input type="checkbox"/> Asbestos*	<input type="checkbox"/> Corrosive	<input checked="" type="checkbox"/> Flammable	<input type="checkbox"/> Magnetic Field	<input type="checkbox"/> Pressurized Systems
<input type="checkbox"/> Beryllium*	<input type="checkbox"/> Cryogenic	<input type="checkbox"/> Fumes/Mist/Dust*	<input type="checkbox"/> Material Handling	<input type="checkbox"/> Rigging/Critical Lift
<input type="checkbox"/> Biohazard*	<input type="checkbox"/> Electrical	<input type="checkbox"/> Heat/Cold Stress*	<input type="checkbox"/> Noise*	<input type="checkbox"/> Toxic Materials*
<input type="checkbox"/> Chemicals*	<input type="checkbox"/> Elevated Work*	<input type="checkbox"/> Hydraulic	<input type="checkbox"/> Non-ionizing Radiation	<input type="checkbox"/> Vacuum
	<input type="checkbox"/> Excavation	<input type="checkbox"/> Lasers*	<input type="checkbox"/> Oxygen Deficiency*	<input type="checkbox"/> OTHER _____

\*Does this work require medical clearance or surveillance from the Occupational Medicine Clinic? ☐ Yes ☒ No

**ENVIRONMENTAL CONCERNS** ☐ NONE

<input type="checkbox"/> Atmospheric Discharges (rad/non-rad)	<input type="checkbox"/> Liquid Discharges	<input type="checkbox"/> Work impacts Environmental Permit No. _____
<input type="checkbox"/> Chemical or Rad Material Storage or Use	<input type="checkbox"/> Oil / PCB Management	<input type="checkbox"/> Soil activation/contamination
<input type="checkbox"/> Cesspools (UIC)	<input type="checkbox"/> Protected areas / species	<input type="checkbox"/> Waste - Mixed
<input type="checkbox"/> High water / power consumption	<input type="checkbox"/> Spill potential	<input type="checkbox"/> Waste - Clean
		<input type="checkbox"/> Waste - Hazardous
		<input type="checkbox"/> Waste - Industrial
		<input type="checkbox"/> Waste - Regulated Medical
		<input type="checkbox"/> OTHER _____

Waste disposition by: \_\_\_\_\_

**POLLUTION PREVENTION (P2) / WASTE MINIMIZATION OPPORTUNITY:** ☐ None ☐ Yes

**Facility Concerns** ☐ NONE

<input type="checkbox"/> Access/Egress Limitations	<input type="checkbox"/> Impacts Facility Use Agreement	<input type="checkbox"/> Temperature Change	<input type="checkbox"/> OTHER _____
<input type="checkbox"/> Configuration Control	<input type="checkbox"/> Maintenance Work on Ventilation Systems	<input type="checkbox"/> Utility Interruptions	
<input type="checkbox"/> Electrical Noise	<input type="checkbox"/> Potential to Cause a False Alarm	<input type="checkbox"/> Vibrations	

**Work Controls**

**WORK PRACTICES** ☐ NONE ☐ Exhaust Ventilation ☒ Lockout/Tagout ☐ Spill Containment  
☐ Back-up Person/Watch ☐ HP Coverage ☐ Posting/Warning Signs ☐ Time Limitation  
☐ Barricades ☐ IH Survey ☐ Scaffolding - requires inspection ☐ Warning alarm (i.e. "high level")

**PROTECTIVE EQUIPMENT** ☐ NONE ☐ Ear Plugs ☐ Gloves ☐ Lab Coat ☐ Safety Glasses  
☐ Coveralls ☐ Ear Muffs ☐ Goggles ☐ Respirator ☐ Safety Harness  
☐ Disposable Clothing ☐ Face Shield ☐ Hard Hat ☐ Shoe covers ☐ Safety Shoes ☐ OTHER \_\_\_\_\_

**PERMITS REQUIRED** ☒ NONE ☐ Cutting/Welding ☐ Impair Fire Protection Systems  
(Please attach) ☐ Concrete/Masonry Penetration ☐ Digging/Core Drilling ☐ Rad Work Permit - RWP No. \_\_\_\_\_  
☐ Confined Space Entry ☐ Electrical Working Hot ☐ OTHER \_\_\_\_\_

**DOSIMETRY/ MONITORING** ☒ NONE ☐ Heat Stress Monitor ☐ Real Time Monitor ☐ TLD  
☐ Air Effluent ☐ Noise Survey/Dosimeter ☐ Self-reading Pencil Dosimeter ☐ Waste Characterization  
☐ Ground Water ☐ O<sub>2</sub>/Combustible Gas ☐ Self-reading Digital Dosimeter ☐ OTHER \_\_\_\_\_  
☐ Liquid Effluent ☐ Passive Vapor Monitor ☐ Sorbent Tube/Filter Pump

**Training Requirements** (List below any location specific training requirements)

Based on analysis above, the Walkdown Team determines the risk, complexity, and coordination ratings below.

ES&H Risk Level: ☒ LOW ☐ MODERATE ☐ HIGH  
Complexity Level: ☒ LOW ☐ MODERATE ☐ HIGH  
Work Coordination: ☒ LOW ☐ MODERATE ☐ HIGH

Note: If all the ratings are LOW, the Work Control Coordinator and Service Provider must sign for concurrence on the back side. Further review of the work permit is not required. If any ratings are MODERATE or HIGH, the entire permit must be completed.

3. Both work requester and service provider coordinate on work plan (use attachments for detailed plans) 100%

**Work Plan:** (procedures, timing, equipment, and personnel availability need to be addressed) Purge Argon  
gas through system for 10 minutes to insure flammable  
component is out of mixing rack and shut off  
SU16, 18, 20, 22 at East & West Carriages to insure no  
flammable component can back up into area of work. Remove  
and replace pressure regulator (PCV1). Pressurize and check  
for leaks. If O.K., reintroduce 50/50 mix into system.

Special Working Conditions Required:                     

Operational Limits Imposed:                     

Post Work Testing Required:                     

Job Safety Analysis Required Yes ☒ No Walkdown Required Yes ☒ No

**Reviewed By:** Primary Reviewer will determine the size of the review team and the other signatures required based on hazards and job complexity. Primary Reviewer signature means that the hazards and risks that could impact ES&H have been identified and will be controlled according to BNL requirements.

Title	Name (print)	Signature	Life #	Date
Primary Reviewer				
ES&H Professional				
Other				
Other	<u>Robert P. ...</u>	<u>[Signature]</u>	<u>21317</u>	<u>12/18/02</u>
Work Control Coordinator*	<u>Carter Biggs</u>	<u>[Signature]</u>	<u>15639</u>	<u>12/18/02</u>
Service Provider*	<u>Carter Biggs</u>	<u>[Signature]</u>	<u>"</u>	<u>"</u>

\*Only signatures required for concurrence on LOW rated jobs.

Review done: in series team

4. Job site personnel fills out this section

Note: Signature indicates personnel performing work have read and understand the hazards and permit requirements (including attached permits).

Job Site Supervisor	<u>[Signature]</u>	Contractor Supervisor	<u>                    </u>
Workers:	<u>[Signature]</u>	Life #	<u>15639</u>
	<u>[Signature]</u>	Life #	<u>10222</u>
	<u>                    </u>	Life #	<u>                    </u>
	<u>                    </u>	Life #	<u>                    </u>

Workers are encouraged to provide feedback on ES&H concerns or on ideas for improved job work flow. Use feedback form or space below.

5. Work Requester or designee fills out this section

**Conditions are Appropriate to Start Work:** (Work permit has been reviewed, work controls are in place, and site is ready for job.)

Name                      Signature                      Life #                      Date                     

6. Work Requester determines if Post Job Review is required No Yes (Fill in names of reviewers)

**Post Job Review:**

Name:                      Signature                      Life #:                      Date:                     

Name:                      Signature                      Life #:                      Date:                     

7. Worker provides feedback

**Worker Feedback:**                       
                      
                    

8. Work Control Coordinator (requesting dept.) checks quality of completed permit and closes out

**Closeout:** Name                      Signature                      Life #:                      Date:                     

Comments: